

AMENDMENTS TO THE SPECIFICATION

Please replace Paragraphs [0029] and [0030] with the following paragraphs rewritten in amendment format:

[0029] To resolve the limitations of humidification by water injection alone, humid cathode exhaust gas is fed back or is recycled to the compressor 22 through a feedback conduit 32. The feedback conduit 32 is connected to the suction inlet 26. A metering device 34 controls the rate of flow of the feedback gas to the suction inlet 26. Metering device 34 is located between the exhaust outlet of the fuel cell stack 12 and suction inlet 26. More specifically, metering device 34 is located between water separator 24 and suction inlet 26. Fresh air and the feedback gas are mixed in the suction inlet 26 and are drawn into the compressor 22. The feedback gas has a relative humidity of at least 100%. The feedback gas stabilizes the water vaporization process within the compressor 22 and provides another parameter for regulating the relative humidity and discharge temperature. For example, by increasing the feedback gas flow the amount of injected water can be decreased.

[0030] A controller 40 communicates with the compressor 22, the injector 30 and the metering device 34. As such, metering device 34 may be generally controlled independently of any feedback from suction inlet 26. The controller 40 regulates the relative humidity of the gas supplied to the cathode side of the fuel cell stack 12. The controller 40 controls the amount of air injected into the compressor 22. The controller 40 controls the compression pressure of the compressor 22 based on the amount of injected water to enable complete vaporization of the water. The compression pressure can be determined in a number of manners including a look-up table or a calculation

based on the amount of water injected into the compressor 22. Further, the controller 40 adjusts the metering device 34 to control the rate of flow of the feedback gas to the suction inlet 26.